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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/660,089 | 09/11/2003 | Chin-Hui Huang | JCLA11934 | 5904 |
| 23900 | 7590 | 01/24/2007 | EXAMINER | |
| J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618 | | | KASSA, YOSEF | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2624 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 01/24/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/660,089 | HUANG ET AL. | |
| | Examiner | Art Unit | |
| | YOSEF KASSA | 2624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 September 2003.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 12 is/are allowed.
 6) Claim(s) 1 is/are rejected.
 7) Claim(s) 2-11 and 13 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 11 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake (U.S. Patent 6,400,413).

With regard to claim 1, Miyake discloses receiving the low resolution pixels Y_{1j} (please refer to col. 4, lines 65-67);

determining a homogenous area and an edge area of the image based on pixel differences of the pixels $Y_{2i, 2j}$ in comparing with a threshold (refer col. 8, lines 25-38 and col. 7, lines 49-65);

interpolating the low resolution pixels belonging to the homogenous area into the high resolution pixels by a first interpolating algorithm (refer col. 14-30); and

interpolating the low resolution pixels belonging to the edge area into the high resolution pixels by a second interpolating algorithm (refer col. 6, lines 12-22). Although, Miyake reference does not expressly call for the process of "comparing with a threshold", it would have been obvious if not inherent, that Miyake does in fact has set of threshold values for setting MAX and MIN values. Thus, an ordinary artisan would have recognized the term "threshold values" is used in Miyake reference to determine the maximum and minimum values of image information.

Reasons for Allowance

2. Claim 12 are allowed.

The following is an examiner's statement of reasons for allowance. The closest prior art of record failed to teach or suggest, determining at least one of edge pixel and interpolating the pixels $Y_{2i, 2j}$ if the pixel to be interpolated is not the edge pixel by a first algorithm as follows:

if $\Delta Y_1 <$ a threshold then

$$Y_{2i+P, 2j+Q} = (Y_{2i, 2j} + Y_{2i+2P, 2j+2Q})/2$$

else

$Y_{2i+P, 2j+Q}$ are the edge pixel

if $\Delta Y_2 <$ the threshold and $\Delta Y_3 <$ the threshold then

$$\Delta Y_{MIN} = \min\{ \Delta Y_2, \Delta Y_3 \}$$

if $\Delta Y_{MIN} = \Delta Y_2$

$$Y_{2i+1, 2j+1} = (Y_{2i+2, 2j} + Y_{2i, 2j+2}) / 2$$

else

$$Y_{2i+1, 2j+1} = (Y_{2i, 2j} + Y_{2i+2, 2j+2}) / 2$$

else if $\Delta Y_2 <$ the threshold then

$$Y_{2iH, 2j+I} = (Y_{2i+2, 2i} + Y_{2i, 2j+2}) / 2$$

else if $\Delta Y_3 <$ the threshold then

$$Y_{2i+1, 2j+1} = (Y_{2i, 2j} + Y_{2i+2, 2j+2}) / 2$$

$Y_{2i+1, 2j+1}$ is one of the edge pixel.

Allowable Subject Matter

3. Claims 2-11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5847847), (6744916), (6097842), (6633683) and (5940123).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (571) 272-7452. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and (571) 273-8300 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PATENT EXAMINER

Yosef Kassa

01/18/2007.

A handwritten signature in black ink, appearing to read "Yosef Kassa". The signature is fluid and cursive, with the first name starting with a large 'Y' and the last name with a 'K'.